

USSN 10/289,168

Response

REMARKS

Claim 1 is amended to further describe the bi-directional cure of the gel coat. As amended, the bi-directional cure is initiated in a manner such that a cure gradient is established in the direction from the casting film or first surface towards the open environment or second surface of the uncured gel coat before the second cure step is initiated. Support for this amendment is found in the specification at paragraph 40 of US 2002/0000290 A1.

The claims are subject to a restriction requirement in which Claims 1-19, 27-32 and 34-35, drawn to a method of applying and curing a gel coat, are classified in Group I, and Claims 20-26 and 33, drawn to a gel coat, are classified in Group II. The Applicants, through their attorney, have previously elected with traverse to prosecute the invention of the Group II claims.

The Applicants here confirm their election, again with traverse. The Examiner is respectfully requested to note that the claims of Group II depend from the process claims of Group I and as such, are product-by-process claims. The gel coats of the Group II claims cannot be made by a process other than the process by the claim from which they depend. The Examiner is respectfully requested to reconsider this restriction requirement, and then to withdraw it. Given this traversal of the restriction requirement, the Applicants have not withdrawn from further consideration the claims of Group II.

Claims 1, 27, 32 and 34-35 are rejected under 35 USC §102(b) as anticipated by Gupta (USP 5,702,819). The Examiner argues that Gupta discloses a method of manufacturing lenses comprising the steps of applying an uncured gel coat to a nonporous mold, and then exposing the first and second surfaces of the resin to actinic radiation to cure the resin. The Examiner further

884667.1

USSN 10/289,168

Response

As the Examiner well knows, anticipation requires that each and every element of the claimed invention is taught in a single reference. Gupta does not teach each and every element of Claim 1. Specifically, Gupta does not teach that one surface of the uncured gel coat is open to the environment (Gupta teaches that the uncured gel coat or resin is sandwiched between a mold surface and a preform surface), and Gupta does not teach establishing a cure gradient in the uncured gel coat in the direction of the mold surface to the opposite surface (Gupta is simply silent on this point). As such, Gupta cannot anticipate Claim 1 and since Gupta cannot anticipate Claim 1, it cannot anticipate Claim 34 which depends from Claim 1. The rejection as it applies to Claims 27, 32 and 35 is moot in view of the cancellation without prejudice of these claims.

The rejection of Claims 27-28 and 30-32 under 35 USC §102(b) as anticipated by Cordts (USP 4,295,907) is also moot given the cancellation without prejudice of these claims.

Claims 1-2, 4-5 and 8 are rejected under 35 USC §102(b) as anticipated by or, in the alternative, under 35 USC §103(a) as obvious over Cordts. The Examiner argues that Cordts teaches a process for making glass fiber reinforced laminates comprising the steps of applying an uncured gel coat to a nonporous mold, e.g., plastic film, exposing the surface of the gel coat that is in contact with the mold to actinic radiation, and then exposing the second surface of the gel coat to actinic radiation. Here again, however, Cordts does not teach establishing a cure gradient in the uncured gel coat that proceeds from the direction of the first surface to the second surface. Moreover, nothing in Cordts even begins to suggest the benefits of establishing such a gradient, e.g., lower warpage, absence of alligatoring, improved gloss and/or porosity size reduction. The full extent of Cordts teaching on bi-directional curing is at column 5, lines 61-62, where it is simply identified as a possibility. It does not provide any preference or incentive to choose

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USSN 10/289,168

Response

bi-directional curing over uni-directional curing, much less bi-directional curing in which a cure gradient from mold to atmosphere is established prior to initiating the second cure.

Claims 3 and 29 are rejected under 35 USC §103(a) as obvious over Cordts in view of Borrel (USP 3,655,483). Cordts is applied as before, and Borrel is cited for the teaching that the carrier film or substrate support can be formed from a terephthalic polyester. Here again, however, this basis of rejection is in error because the combination of Cordts and Borrel still does not teach bi-directional curing in which a cure gradient is established in the uncure gel coat. Moreover, Claim 29 has been cancelled without prejudice.

Claims 6-7, 9-15 and 17-18 are rejected under 35 USC §103(a) as obvious over Cordts in view of Russell (USP 4,338,269). Cordts is applied as before, and Russell is cited for its teaching regarding the use of mercury vapor lamps as a preferred source of ultraviolet radiation. Here too, the combination of Cordts and Russell fail to teach or provide incentive for bi-directional curing in a manner that establishes a cure gradient of the uncured gel coat from the casting film to the open environment.

Claims 34 and 35 are rejected under 35 USC §103(a) as obvious over Cordts in view of Gupta. Cordts is applied as before, and Gupta is applied for its teaching regarding the use of thermal energy to augment the ultraviolet light cure of the uncured gel coat. Again, this combination of references fails to teach the merits of a bi-directional cure in which a cure gradient is established in the uncured gel coat from casting film to the open environment. Moreover, Claim 35 has been cancelled without prejudice.

Finally, Claims 1-9, 16-19 and 27-32 are rejected under 35 USC §103(a) as obvious over Meoni (USP 4,734,143) in further view of Cordts and Borrel. The Examiner cites Meoni for the teaching of a method for forming a composite ribbon, the method comprising the steps of

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USSN 10/289,168

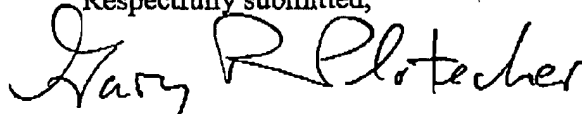
Response

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applying a gel coat to a mold or film, and then exposing the gel coat to actinic radiation in a polymerization tunnel. The Examiner acknowledges that Meoni fails to teach bi-directional curing, but cites to Cordts and Borrel for that teaching. As with the other combination of references, here too the references either alone or in combination with one another fail to teach bi-directional curing in which a cure gradient is established in the uncured gel coat from the casting film to the open environment. Not only is this teaching absent from these references, but so is any suggestion or incentive to employ a bi-directional cure.

The Examiner is respectfully requested to reconsider each and every basis of rejection, and then to withdraw each rejection and forward the application to issuance.

Respectfully submitted,



Gary R. Plotecher
Registration No. 27,830

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ADDRESS:

WHYTE HIRSCHBOECK DUDEK S.C.
111 East Wisconsin Avenue, Suite 2100
Milwaukee, Wisconsin 53202
(414) 273-2100
Customer No. 022202

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Page 9 of 9